

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated October 6, 2005 (Paper No. 09302005). In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1 through 15 are currently pending in the above-identified application. Claims 1 through 4 and 6 are being amended to correct formal errors, place the claims in better form and to more particularly point out and distinctly claim the subject invention. Also, new Claims 8 through 15 are being added. Entry of the amendments to Claims 1 through 4 and 6, and entry of new Claims 8 through 15, are respectfully requested.

Additional Amendments

The Specification has been amended to correct formal errors and to better disclose and describe the features of the present invention. Entry of the amendments to the Specification is respectfully requested.

Prior Art Rejections

Claims 1, 2 and 7 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,107,757 to Ohshita et al., hereinafter the Ohshita '757 patent. This rejection is respectfully traversed.

Claims 3 through 6 were rejected under 35 U.S.C. § 103(a) over the Ohshita '757 patent in view of U.S. Patent No. 4,279,760 to Yamamoto, hereinafter the Yamamoto '760 patent. This rejection is respectfully traversed.

The above rejections of Claims 1 through 7 under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) will be considered collectively.

It is respectfully submitted that the Ohshita '757 patent and the Yamamoto '760 patent do not disclose:

A dewatering system for dewatering a material, the system including: a pressure roller dewatering apparatus including: two dewatering rollers positioned parallel to each other, the distance between the dewatering rollers being freely adjustable for forming a cake from the

dewatered material, and at least one water-absorbent draw-in member provided on the external periphery of at least one of the dewatering rollers; and a water content-controlling unit for dewatering the material until the water content of the material is reduced to a liquid limit or lower, to adjust the water content of the material based upon a relationship between the water content of the dewatered material to be fed to the dewatering rollers and a predetermined thickness of the cake to be formed from the dewatered material, and for supplying the resulting water-content-controlled dewatered material between the two dewatering rollers, the water content-controlling unit being disposed upstream of the pressure roller dewatering apparatus, as respectively recited in independent Claim 1.

The present invention relates to an improved dewatering system for dewatering dredged soils from dams, lakes, rivers, and the like, soils produced by construction, and sludge from industrial wastewater and sewage. In particular, it relates to a pressure roller dewatering system in which the amount of the extracted water returning to the supply-side of the pressure roller dewatering apparatus is reduced, the performance of two dewatering rollers for drawing in the material between the dewatering rollers is improved, and the amount of the undewatered material is reduced. (See Specification, page 1, lines 4-13)

According to the above described features of the present invention, various types of flocculated sludge having different water contents can be dewatered using the dewatering system of the present invention. An exemplary relationship between the cake thickness and the water content of the sludge is shown in Figure 2 of the above-identified application. As shown in Figure 2, the larger the water content of the sludge, the thinner the cake. The smaller the water content of the sludge, the thicker the cake. The liquid limit of the sludge shown in exemplary relationship of Fig. 2 is 190%, as an example, and the thickness of the cake dramatically increases at water contents less than about 190% in the exemplary relationship of Figure 2. Therefore, as is described above, a feature of the present invention is to adjust the water content of the sludge to be fed to the pressure roller dewatering apparatus 3 based on the relationship between the water content of the sludge and the thickness of the cake while taking into account the liquid limit. (See Specification, page 16, lines 1-24).

The Ohshita '757 patent discloses in Figure 20 therein a belt press type dehydrator that includes a preliminary dewatering section 105 and a primary press section 107. Further, the Ohshita '757 patent discloses that in the preliminary dewatering section 105, the filter cloth belts 102 and 103 are laid one upon the other while sandwiching the substance to be

dewatered to transport the substance to the primary press section 107, where it is disclosed as being subjected to primary pressing. Further, the substance to be dewatered in the Ohshita '757 patent is pressed between the press rolls 108 and 109. Also, the Ohshita '757 patent notes an example of an obtained dewatering cake having a cake thickness of from 3 to 10 mm and a water content of 60% or less. (See Col. 17, line 10 to Col. 18, line 58)

However, it is respectfully submitted that such above described disclosure of the Ohshita '757 patent does not disclose a water content-controlling unit for dewatering the material until the water content of the material is reduced to a liquid limit or lower, to adjust the water content of the material based upon a relationship between the water content of the dewatered material to be fed to the dewatering rollers and a predetermined thickness of the cake to be formed from the dewatered material, as respectively recited in independent Claim 1.

Further, it is respectfully submitted that the Yamamoto '760 patent, cited for its disclosure of a transfer roller, a scraper, a washing nozzle and a squeezer roller (Office Action, pages 3 and 4) also does not disclose or teach a water content-controlling unit for dewatering the material until the water content of the material is reduced to a liquid limit or lower, to adjust the water content of the material based upon a relationship between the water content of the dewatered material to be fed to the dewatering rollers and a predetermined thickness of the cake to be formed from the dewatered material, as respectively recited in independent Claim 1.

Therefore, it is respectfully submitted that Claim 1 is not anticipated by the Ohshita '757 patent, and is not obvious over the Ohshita '757 patent in view of the Yamamoto '760 patent. Claims 2 through 7 and new Claims 8 through 15, which ultimately depend from Claim 1, are at least allowable for the same reasons that Claim 1 is allowable.

Therefore, withdrawal of the 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) rejections of Claims 1 through 7 is respectfully requested.

Reconsideration and allowance of Claims 1 through 7, and consideration and allowance of new Claims 8 through 15, are respectfully requested.

Conclusion

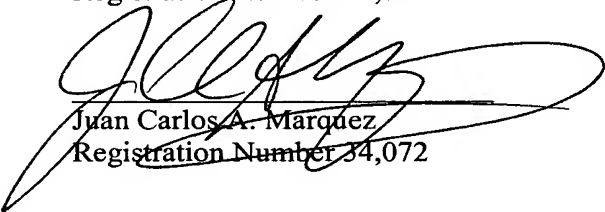
In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more

than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344


Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive, Suite 1400
Falls Church, Virginia 22042
(703) 641-4200

December 30, 2005

SPF/JCM/JB